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## JUSSIAEA URUGUAYENSIS IN STATEN ISLAND, NEW YORK

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On Sept. 17, 1944, the writer discovered a large showy colony of Primrose-Willow in a pond located about 100 yards north of the corner of Richmond Valley Rd. and Arthur Kill Rd., Staten Island, Richmond Co., New York. The pond is a permanent one, apparently, and consists of fresh water separated from the Arthur Kill by a narrow stretch of sand; it is quite removed from immediate habitation. An area of several hundred feet of shore around this pond was densely populated with Jussiaea, which waded out into the water some two or three feet deep and formed an almost exclusive stand. Its only associate represented in an appreciable number was Glyceria obtusa.

The Jussiaea was extensively creeping, the flowering stems erect with the flowers large and striking (the fugacious petals about 2.5 cm . long and 1.5 cm . broad). The leaves on the upright stems were elliptic or lanceolate, narrowed at both ends, usually $5-9 \mathrm{~cm}$. long inclusive of the petiole, $1-2 \mathrm{~cm}$. broad; bracteoles lanceolate, about $1.5-1.6 \mathrm{~mm}$. long; capsules $1.5-2$ cm . long and $3-4 \mathrm{~mm}$. diam. The plants were moderately to sparsely pilose, except for the calyx-tube which was rather densely so. A careful survey indicated this pubescence character to be quite uniform in all the plants examined.

On Dec. 3 of the same year the writer revisited the Jussiaea station. The aerial stems of the plants were completely withered, while the creeping rhizomes and shoots submerged beneath the
frozen surface of the pond were in full vigor and with bright green leaves. Matured fruits were scarce.

The species has been known as Jussiaea grandiflora Michx., and it is given this name by Muenscher in his recent (1944) "Aquatic Plants of the United States." Hassler (Fedde Rep. Sp. Nov. 12: 276. 1913) placed $J$. grandiflora in synonymy of $J$. repens L. subsp. hirsuta Hassler var. grandiflora (Michx.) Hassler. From the interpretation presented by P. A. Munz (Studies in Onagraceae XII. A Revision of the New World Species of Jussiaea. Darwiniana $4(2-3): 190,268,269$. 1942) the identity of our plant is $J$. uruguayensis Camb. var. genuina Munz. Concurring with Hassler in recognizing a very close affinity between the repens and the grandiflora elements, this authority stated that $J$. uruguayensis "is very near to $J$. repens and perhaps doubtfully distinct."

Search of literature failed to disclose any record of $J$. uruguayensis north of North Carolina. In the herbarium of the N. Y. Bot. Gd. there is a specimen of this species, ex herb. C. D. Lippincott, of a plant which grew in a garden from root originally brought from South Carolina by C. Williamson; coll. Lippincott, Swedesboro, N. J., 9-10-1900. (Identification confirmed by Munz.) The northernmost station for the species (var. genuina) cited by Munz in Darwiniana is from near Wilmington, N. Carolina.
M. L. Fernald (Rhodora 46: 197. 1944) reports Jussiaea Michauxiana Fernald, which is a new name for J. grandiflora Michx. (not Ruiz \& Pavon), as locally abundant on stream-banks in Berks County, Pennsylvania, where it was discovered by H. Wilkens in 1941. This plant was identified by Munz as J. uruguayensis. Subsequently, a second sheet of the same species, labeled $J$. uruguayensis, was sent to the Gray Herbarium, this collected by W. C. Brumbach at another station in Berks County, Pennsylvania. M. L. Fernald maintains these collections of $J$. Michauxiana as distinct from true $J$. uruguayensis. In a personal communication, Prof. Fernald kindly informed the writer that there is no doubt about the identity of his plant from Staten Island and that the eastern Pennsylvania species is not like it.

The 1867 edition of Gray's Manual notes J. repens as naturalized near Philadelphia. Munz cites several collections of $J$.
repens var. glabrescens Kuntze from the vicinity of Philadelphia: "New Jersey, Camden, Parker in 1870, in 1866. Pennsylvania, Philadelphia, without collector's name; Delaware Co., Hog Island, Fogg 9775."

A letter was sent by the writer to William T. Davis inquiring about any possible information on the establishment of Jussiaea in Richmond Co., but he received the sad news from Mr. Coles, the Director of the S. I. Institute of Arts and Sciences, that the venerable authority on Staten Island had recently died. The query was transferred to Mr. Ellison, President of the Bird and Nature Club of Staten Island, who reported that none of the members of the club had observed Jussiaea uruguayensis.

Vouchers (Monachino 427) for the subject of the present discussion are deposited in the Gray Herbarium and the New York Botanical Garden.

New York Botanical Garden

## CONTRIBUTIONS FROM THE GRAY HERBARIUM OF HARVARD UNIVERSITY-NO. CLVII

M. L. Fernald

## I. KEY TO ANTENNARIA OF THE "MANUAL RANGE"

(Continued from page 235)
26. A. Farmellit Greene, Pittonia, iii. 347 (1898) ; Fernald in Rhodora, xxxviii. 230, t. 433, fig. 3 (1936). Very local, Bruce Pen., Ont., and Keweenaw Co., Mich. Staminate plant unknown. June, early July.
27. A. munda Fernald, 1. c. 229, t. 433, figs. 1 and 2 (1936). $A$. occidentalis sensu Robinson \& Fernald in Gray, Man. ed. 7, 821, fig. 879 (1908), not Greene. Centr. Me. to Thunder Bay Distr., Ont., s. to Mass., Ct., N. Y., e. Va. (local), W. Va., n. Ind., Wisc. and Minn. Staminate plant very rare: Mid-May-mid-June.
28. A. fallax Greene, Pittonia, iii. 321 (1898); Fernald in Rhodora, i. 74 (1899). A. arnoglossa, var. ambigens Greene, Pittonia, iii. 320 (1898). A. Parlinii, var. ambigens (Greene) Fernald in Proc. Bost. Soc. Nat. Hist. xxviii. 244 (1898). A. ambigens (Greene) Fernald in Rhodora, i. 150 (1899). A plantaginifolia, var. ambigens (Greene) Cronquist, 1. c. 183 (1945). Centr. Me. to s. Ont. and Minn., s. to Va., Tenn., Ark. and e. Tex. Staminate plants abundant southw. and westw., rare northeastw. April-July. Plates 945 and 946.

